c) REMARKS

The claims are 1-36, 44 and 45 with claims 1, 15 and 27 being independent. Claims 1 and 3 have been amended to better define the intended invention.

Claims 15-36 have been deemed allowable over the prior art of record. Claim 6 was deemed allowable if rewritten in independent form. Because Applicants believe the present claims are patentably distinct, claim 6 has not been rewritten for the reasons which follow.

Claims 1 and 3 have been amended to provide that the layer which has holes is a mainly aluminum layer. Support for this amendment is found, inter alia, on page 16, lines 18-22. Support is found throughout the specification for new claims 44 and 45.

The Examiner has rejected claims 1-5 and 17-14 as obvious over EP '545 to Iwasaki in view of WO '973 to Lambeth and JP '318. The Examiner admits Iwasaki fails to teach that the substance which fills the pores has a hcp structure in which the c-axis is oriented in a direction perpendicular to the substrate. The Examiner also admits JP '318 fails to state that the alloy has an hcp structure in which the c-axis is oriented in a direction perpendicular to the substrate. Lambeth is said to teach an alloy having an hcp structure along the c-axis in which the c-axis is perpendicular to the plane of the substrate. The grounds of rejection are respectfully traversed.

Prior to addressing the grounds of rejection, Applicants wish to briefly review certain key features and advantages of the present claimed invention. The present invention is characterized in that the c-axis of the magnetic substance which fills the holes is oriented in a direction perpendicular to the substrate. The orientation of the magnetic

substance renders the direction of magneto-shape anisotropy and magneto-crystalline anisotropy, the same. This is supported on page 36, line 26 to page 37, line 5 in which it is disclosed that by orienting the c-axis, "not only the shape but also magneto-crystalline anisotropy can be used effectively, and that it is possible to suppress inversion of adjacent nanoholes of the hard substance due to interaction . . .".

It will be shown that Lambeth merely discloses that the c-axis is oriented in a direction perpendicular to the face of the substrate, but that the shape anisotropy is directed to the in-plane direction. As noted, the orientation of the c-axis in the present invention is in a direction perpendicular to the face of the substrate so that the magneto-crystalline anisotropy is oriented in a direction perpendicular to the face of the substrate. As noted in Fig. 2A of Lambeth, the magnetic layer 16 is formed as a continuous film on substrate 12. As noted on page 9, lines 14-16 of Lambeth, the layer is oriented with a set of crystal planes parallel to the substrate surface. This is because the domain grains of the magnetic layer tend to orient with the layer beneath. Since the substrate and underlayers are deposited horizontally, the shape anisotropy of the magnetic layer of Lambeth will be in the direction of the plane of the substrate.

Accordingly, in Lambeth, the direction of magneto-crystalline anisotropy and magneto-shape anisotropy are substantially orthogonal to each other (perpendicular to each other). This is different in kind to the present claimed invention in which the magneto-shape and crystalline anisotropies have the same direction, both perpendicular to the face of the substrate. This provides Applicants with a greater magneto-anisotropy, since both magneto and shape directions are in the same direction.

The Examiner's attention is also directed for example, to pages 34 and 35 of Lambeth in which a single crystal-oriented silicon substrate is prepared. A silver layer, then epitaxially grows and is deposited using the silicon layer as a template. Thereafter, magnetic layers are sequentially deposited on the silver layer. Because of lattice matching between the silicon and Ag interface, the magnetic layers grow in an in-plane direction with regard to the silver and silicon layers.

Lambeth fails to teach a structure in which a substrate has holes, which are filled with a magnetic substance. Instead, Lambeth teaches deposition of a magnetic film on a substrate. It is clear that the combination of Lambeth and the other references would not achieve the present claimed invention and would not raise a prima facie case of obviousness. In Lambeth, the shape of the magnetic layer is parallel to the substrate. When this teaching is combined with Iwasaki, the resulting medium would have a magnetic substance whose shape and c-axis are oriented in perpendicular directions to each other and, accordingly, fail to achieve the advantages of the present invention.

In view of the present amendments and arguments, reconsideration and allowance of the claims are respectfully requested.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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